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June 16, 2005

Margaret Efron, Patent Attorney

SUPPLEMENTAL AMENDMENT
UNDER 37 C.F.R. §1.111
Patent Application
Examining Group 3736
Docket No. UF-270
Serial No. 10/054,619
Confirmation No. 5786

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner	:	Navin Natnithithadha
Art Unit	:	3736
Applicants	:	Richard J. Melker and David Bjoraker
Serial No.	:	10/054,619
Filed	:	January 22, 2002
Conf. No.	:	5786
For	:	Method and Apparatus for Monitoring Intravenous (IV) Drug Concentration Using Exhaled Breath

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL AMENDMENT UNDER 37 CFR §1.111

Sir:

In response to the Office Action dated May 10, 2005, please amend the above-referenced application as follows:

Amendments to the Claims are reflected in the listing of claims beginning on page 2 of this paper.

Remarks/Arguments follow the amendment sections of this paper.

In the Claims:

This listing of claims will replace all prior versions and listings of claims in this application.

1 (Canceled).

2 (Previously presented). The method of claim 3 wherein the breath is analyzed after a predetermined period of time.

3 (Previously presented): A method for determining the blood level concentration of at least one agent selected from the group consisting of anesthetics, analgesics, muscle relaxants, sedatives, and anxiolytics, wherein the agent is administered into a patient's bloodstream, comprising:

sampling a patient's expired breath;

analyzing the breath for concentration of at least one substance indicative of the agent using sensor technology;

determining at least one blood level concentration based on the concentration of at least one substance indicative of the at least one agent; and

using a flow sensor to detect starting and completion of exhalation during said sampling step.

4 (Previously presented): The method of claim 3 further comprising the step of controlling an infusion pump for delivering the agent intravenously based on the determined blood level concentration.

5 (Previously presented). The method of claim 3 wherein the agent is delivered by a delivery method selected from the group comprising: intravenous continuous delivery, parenteral delivery, sublingual delivery, transdermal delivery, and intravenous bolus delivery.

17 (Previously presented). The method of claim 3 wherein the determined blood level concentration is measured for a level indicative of recovery.

18 (Previously presented). The method of claim 3 wherein the sampling is continuous.

19 (Previously presented). The method of claim 3 wherein the sampling is periodic.

20 (Previously presented). The method of claim 3 wherein the patient's breath is analyzed by sensor technology selected from semiconductor gas sensor technology, conductive polymer gas sensor technology, or surface acoustic wave gas sensor technology.

21 (Original). The method of claim 20 wherein the sensor technology produces a unique electronic fingerprint to characterize the concentration of said at least one substance.

22 (Previously presented). The method of claim 3 further comprising the step of recording data resulting from analysis of the patient's breath.

23 (Currently amended). The method of claim 3 further comprising the step of transmitting or displaying data resulting from analysis of the patient's breath.

24 (Previously presented). The method of claim 3 wherein the analysis of the patient's breath includes comparing the substance sensed in the patient's breath with a predetermined signature profile.

25 (Previously presented). The method of claim 3 further comprising the step of capturing the patient's breath in a vessel prior to analysis.